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ABSTRACT

A network system includes a hierarchical directory which includes a plurality of nodes in a tree structure. Each node contains a set of address mappings relating a first address to a second address. An address resolution request attempts to resolve a first address to a target address in a node in which the first address is located. If the resolution of this first address cannot be accomplished in this first node, the process moves to a next higher node in the hierarchy and again attempts to resolve the request. The address mappings become less specific as the process moves up the hierarchy and, as a result, more general addresses will be used to resolve the first address to the target address.